

More Mysteries About Consciousness?

Review of *Consciousness: Psychological and Philosophical Essays* by M. Davies & G.W. Humphreys

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Without doubt Davies and Humphreys' book still deserves the applause displayed on its back cover. Ned Block tells us there that the book is "the best anthology on consciousness to date," and the following commentary is a plea to re-read after five years one, as it seems, almost forgotten book which has nevertheless clearly influenced the development of empirical approaches to consciousness. Although more recently other excellent anthologies have been published (e.g., Block, Flanagan and Guzeldere, 1996), this book is still highly recommendable at various pedagogical levels and it can only be suggested that a second updated edition be made available in the future. Its subtitle 'Psychological and Philosophical Essays' describes the book's range precisely.

After an extended introduction, which reads extremely well and which I will discuss at the end, the first part consists of five psychological essays (chapters 1-5) which have in common that they are concerned with the functional effects of consciousness on behaviour. This is followed by eight philosophical essays (chapters 6-13) which concentrate on such issues as intentionality and the elusiveness of phenomenal experience, per Thomas Nagel. The topics include the distinction between physical and

phenomenal aspects of consciousness, leading to what Levine termed the 'explanatory gap'. First, I will summarize briefly the chapter contents.

In chapter one, Reingold and Merikle identify some of the critical issues that underlie the controversial topic of perception with and without awareness and suggest possible directions for resolving the controversy. Their main criticism of current work is that theoretical goals and methodological tools are often confused and therefore debates over empirical findings often reflect more the contrasting hidden assumptions than the differing results. They suggest psychologists should make more use of qualitative differences in cognitive processing according to whether the subject is aware of the stimulation or not. A distinction between stimulus processing with and without awareness seems to reflect functional changes in the mind and would provide an approach for investigating the functional role of consciousness.

In chapter two, a different approach is introduced by Young and de Haan who are concerned with psychopathological disturbances of conscious experience. They present evidence from two areas of neuropsychology (blindsight, amnesia) for their claim that there are qualitative differences in processing information under conscious and unconscious modes of processing. They discuss the phenomenon of 'blindsight', as described by Weiskrantz (1986), in which people with damage to the visual cortex show discriminatory responses to visual stimuli of which they claim no conscious awareness. Patients seem to be able to process some stimulus dimensions (e.g., location, orientation) but not others (e.g., form) in their blind field. The authors take this as evidence for qualitatively different processing modes under conscious and non-conscious conditions. For other cases of brain damage (e.g., neglect due to haemorrhage, p. 68), they argue that one can demonstrate that only the mechanisms dealing with conscious processing are deficient while at the same time these patients are able to process the same stimuli by other means. Therefore, their interpretation of these findings seems to challenge a unitary mechanism of consciousness and instead suggests separate mechanisms tied to particular stimulus properties. Young and de Haan's careful discussion of the neuropsychological approach seems extremely useful for uncovering conscious mechanisms in particular cases. Their approach stressing specificity in processing certainly avoids the gross handling of brain-behaviour relationships often to be found in interpretations of neuropsychological testing results (cf. Henderson and Dittrich, 1996). Nevertheless, it should be noted that recent findings about the so-called 'blindsight' phenomenon might throw serious doubts on its existence all together (see Ffytche, Guy, and Zeki, 1996; Weiskrantz, 1996).

In chapter three, Kelley and Jacoby try to explain consciousness by analysing different modes of memory, namely implicit (unconscious) and explicit (conscious) memory processes. They hold that conscious recollection itself is always mixed with past memory episodes. Therefore, they ask, what then leads people to experience their recollections as remembering rather than imagining, perceiving, or thinking (p. 77)? In this context, they consider the relation between intentional control and memory. The chapter illustrates ways in which some cognitive psychologists attempt to operationalize the notion of intentionality. Although the authors seem to acknowledge the wider concept of

intentions, their discussion is narrowly confined to the topic of whether intentions are the result of mere attributions during memorizing and how such attributions influence remembering. In any case, the reader will likely find the experimental techniques by which participants were tricked into illusory recollections, by manipulating the ease with which they perceive stimuli, highly interesting. These techniques are suggestive of new methods for the study of consciousness at a psychological level.

In chapter four, Oatley proposes that the first attempt to develop a psychology of intentions goes back to Freud and he re-describes one of Freud's cases, namely the case of Dora, using Freud's cognitive psychology of intentions. Leaving aside the case history, the concept of intentions used by Oatley seems highly underspecified and in this sense the notion of intentions is used in a way quite contrary to that in the previous chapter. Oatley's assertion (p. 91) that it was Freud who opened up a psychology of intentions alongside a psychology of mental mechanisms reminds me of one solution to the traditional consciousness problem, captured in mind-body dualism. Only in this case the solution seems to transfer the dichotomy completely into the realm of the mind. The new Freudian intention-cognition dualism seems to map directly to the familiar consciousness-unconsciousness dualism.

In chapter five, Heyes and Dickinson address again the methodological question of how intentions can be attributed to actions, but this time not in human but in animal behaviour. Some philosophers will already find their title "The intentionality of animal action" highly controversial in its assumption that animals can not only behave, but also act. The authors present good arguments that proof of intentionality cannot be gained from mere observational studies, but that experimental manipulations are required. The approach they propose is based on two behavioural criteria for intentionality, the belief criterion and the desire criterion. In this respect, they give a fine example of when the measurement of instrumental responses provides a clear criterion for the attribution of psychological functions or what a strict behaviouristic interpretation of animal minds, or even cognitive psychology in general, looks like (one should note, too, that neo-behaviouristic terminology can as easily lead to false assumptions in this field as can the use of mentalistic terms). Not surprisingly, only a minority of studies seem to pass their criterion of intentionality, although it is noteworthy that, however weak the evidence, they seem strongly inclined to admit the existence of animal intentionality. Notably, they finish the chapter with the statement that "to explain the intentionality of instrumental action in terms of psychological mechanism must at present remain an open question." Of course, cognitive mechanisms have always been put into shadow by the behaviourists' searchlight.

In chapter six, Levine addresses the anti-physicalist charge that a reductionist approach misses the phenomenal aspect of consciousness. In discussing Jackson's knowledge argument and Kripke's asymmetry argument he concludes that these arguments fail to show that conscious mental states are fundamentally different from the underlying physical states and processes. He goes on to question the adequacy of physical explanations, not in relation to the way in which a qualitative state leads to the production of behaviour (a physicalist theory would accomplish this), but in relation to accounts

which purport to explain the qualitative character of this behaviour itself, e.g., why is it like what it is like to see these letters. On the basis of an epistemological argument challenging Hempel's 'covering law' model of explanation, Levine introduces the concept of the *explanatory gap*, which is based on the conceivability of a person's instantiating the physical property in question without undergoing an experience with the qualitative character in question or any qualitative character (p. 130). In this, he indeed questions the peculiar nature of our mind itself in that it is so resistant to incorporation in the explanatory model of the hard sciences (see below).

In chapter seven, van Gulick argues strongly on the basis of his Kantian concept of phenomenal experience that neither the 'knowledge argument', nor the 'explanatory gap argument', nor the 'absent qualia argument' give us sufficient reason to accept that phenomenal consciousness resists physical or functional explanation. He concludes that the phenomenal mode of representation can be imagined as the broadcasting role of conscious information processing, not in contrast to, but in fulfillment of, the neural substrate.

In chapter eight, McGinn presents his naturalist position, elaborating on his assumption that consciousness as a natural phenomenon has arisen from a certain organization of matter. His 'emergence' approach is contrasted with a cosmological dualist view presented in form of a dialogue between an earthling and an alien interrogator.

In chapter nine, Biro discusses some arguments that have led to the view that one can not give an objective or scientific account of consciousness. The analysis is focused on the notions of objectivity and subjectivity and asks why scientific theories are supposed to be objective when there are facts which are subjective and not objective. He focuses on Nagel's bat argument, but also addresses the 'qualia' and 'knowledge argument' as well as the 'explanatory gap argument'.

Rosenthal (in chapter ten) and Nelkin (in chapter eleven) introduce a higher-order account of consciousness. The basic idea of higher-order accounts is that mental states have intentional or phenomenal properties, and so consciousness is present, if a subject has a particular mental state that is about another mental state. Consciousness then can be analysed in terms of the subject's beliefs and thoughts about other mental states.

Rosenthal's account is based on the distinction between expressing and reporting. Thoughts that one can report being in are the subject's conscious mental states. Then, to report such mental states is to express higher-order thoughts about it. He explores the importance of this distinction for the higher-order account of consciousness in 19 pages, and 44 footnotes filling one third of the whole chapter.

Nelkin focuses on the claim that intentionality and consciousness are not necessarily linked together. He introduces three different notions of consciousness: intentionality, introspectibility and phenomenologicality. He continues to defend his claim that intentionality is not at all tied to the other two notions of consciousness. Unfortunately, he seems to weaken his approach by switching levels of explanation arbitrarily, and

apparently mixing up empirical evidence, for example 'blindsight', with the conceptual argument over philosophically essential connections between different aspects of consciousness.

In chapter twelve, Rey proposes a language of thought approach based on a model of the Computational Representational Theory of Thought supplemented by a theory of meaning. A two step process is suggested: First, he proposes that the language of thought contains specific predications (e.g., it seems boring) to which a subject stands in computational relation. Second, he supposes that tokens of these predications cause characteristic subsequent processing, and we seem to identify experiences (e.g., something appearing to be boring) with instances of this processing. He discusses the application of this model to aspects of phenomenal consciousness.

In chapter thirteen, Akins confronts Nagel's 'bat argument' with empirical findings about bats' phenomenological experience as recorded on film. She argues strongly for the view that it seems impossible to predict what science will ever reveal. In her analysis of conscious experience she shares van Gulick's assumption: conscious experience is primarily representational.

In the end, the book's title "Consciousness" suggests a far more general reflection on the nature of consciousness than the book delivers. Reviewing the psychological topics, I am puzzled by the absence of any discussion of human action or movement control. However, the justification for the book's title lies in the editors' superb "Introduction" which outlines elegantly the modern dilemma of scientific research on consciousness. It is, of course, the tantalizing prospect of solving the modern mystery of consciousness that has created the huge market for more or less popular expositions of models of consciousness. Davies and Humphreys not only summarize important concepts developed in psychology and philosophy between 1974 and 1993, which are still at the center of the debate on empirical approaches to consciousness, but also hint at the limitations of some approaches. For example, they consider critically (p. 4) whether a psychological account of consciousness really could be taken as the general account of consciousness; or on the philosophical side, they discuss skeptically the possibility of a final demystification of consciousness (p. 35). At the centre of this skepticism is the idea that one can place these current approaches along a graded spectrum, from the position of the New Mysterians (McGinn, Nagel, Block, Jackson) on one side to that of the Demystifiers (Dennett, and even more so, Churchland) on the other (where Flanagan occupies a middle ground position; p. 33), but that no side can offer a solution at present.

Having initially introduced the distinction between phenomenal consciousness and access consciousness, following Block, they then distinguish between two fundamental programmes to be used in current research on consciousness: the "elusiveness" programme and the "demystification" programme. The editors's sophisticated discussion concentrates on the idea that phenomenal consciousness can either be understood as explanatorily elusive (a, pp. 15-23) or with a demystified physical explanation, by appealing to neuroscience (b, pp. 23-35).

a) The elusiveness of phenomenal consciousness is introduced by Nagel's bat argument, which is highlighted in various aspects. Davies and Humphreys' detailed discussion comparing Nagel's bat argument with Block's absent qualia argument and Jackson's knowledge argument reveals clearly the common underlying structure which leads up to the announcement of mystery. The explanatory elusiveness in those models, the editors stress, inevitably leads to one of three solutions: emergentism, substance dualism or panpsychism.

b) Their treatment of possible strategies for demystifying the notion of phenomenal consciousness focuses on two approaches. On the one hand, the 'Higher-order Thought Account' approach, as exemplified by David Rosenthal, is introduced and its limitations are exposed. They ask why the consciousness model, as the advocates of the higher-order account construe it, falls short of the phenomenal consciousness as the campaigners of elusiveness conceive it. On the other hand, Daniel Dennett's attack on the very idea of phenomenal consciousness is explored by introducing Dennett's argument "there are no such properties as qualia." It is suggested that only those in the grip of the metaphor of the Cartesian Theatre could come to insist on determinacy about qualia. Of course, the reductionist account of consciousness stimulating the huge increase in empirical work on consciousness can only be successful if accompanied by an attack on the notion of qualia.

Finally, after having sketched the background for the articles brilliantly, the editors do not answer the question whether the different approaches really have reached 'a point of faith'--whether justified solutions can come out of either the camp of the mysticians or that of the demystifiers. However, despite the editors' elegant arguments, attempts to explain consciousness would sometimes benefit from a more rigorous definition of the notion of consciousness (disappointingly the editors referred to sterile dictionary definitions instead) as the explanandum and a clearer foundation of the appropriateness of the scientific approach as the explanans.

Finally, more than ever, the reader seems left with the dilemma that at the centre of the mystery are two seemingly intractable problems: 1. *Why* does phenomenal consciousness collapse when it is observed through access consciousness? 2. *How* is it that the stable, everyday and conscious experience of the world has its physical basis in the unpredictable, chaotic and prima facie inaccessible behaviour of neuronal circuits, which seem to get more mysterious the more we learn about them?

Solutions to these problems are still waiting to be found, but despite its age this book has made a substantial contribution to the development of an empirical investigative approach. All in all, this is a very fine book in the series "Readings in Mind and Language" and one can only hope for a second, extended edition. I know of hardly a better anthology to begin a study of consciousness, an area that is really just that terrain we all inhabit when we read, wish or aspire to solutions.

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